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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,837	04/02/2004	No-Soon Kim	P-0664	8853

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EXAMINER

CHOW, YUK

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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10/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/815,837

Applicant(s)

KIM, NO-SOON

Examiner

Yuk C. Chow

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/30/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-23 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-23 and 25-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-6, 10-16, 20-23, 25-26 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (US Patent 7,158,173).

As to claim 1, Lee discloses an apparatus (Fig. 1) for controlling a screen brightness value of a terminal comprising: a controller (see abstract, AGC Fig. 1(106)) which controls the terminal to sense an illumination intensity of a photographed object (Fig. 6) around the terminal (Fig. 4(416, 418)), the photographed object comprising a digital image having a plurality of pixels (digital image inherently having a plurality of pixels) , the controller to determine a level of the illumination intensity (see abstract) based on a most frequently detected brightness value of the pixels in the digital image (Fig. 4(406, 414)); also Fig. 9(a) shows the histogram of luminance elements); and a display unit (Fig 1(110)) which controls the screen brightness value of the terminal based on the level of illumination intensity determined by the controller (Fig. 8).

As to claim 2, Lee discloses the apparatus according to claim 1, wherein the terminal includes a camera (Fig. 1(100)).

As to claim 3, Lee discloses the apparatus according to claim 2, wherein the controller controls the camera to photograph the object when a user manipulates or uses the terminal (Col. 4 lines 40-43, image signal generated by photographing of the camera, it is inherent that a user has to manipulate the camera.).

As to claim 5, Lee discloses the apparatus according to claim 4, wherein the display unit sets the screen brightness value of the terminal (Fig. 8 (step 504)) based on the most frequently detected brightness value of the pixels in the digital image (Fig. 4(406, 414), also see Col. 6 lines 4-37).

As to claim 6, Lee discloses the apparatus according to claim 1, wherein, for a predetermined time period (Fig. 4 (step 414)), the controller continuously controls the terminal to sense the illumination intensity (Fig. 4 (step 400-414)) and to determine the level of illumination intensity (Fig. 4 (step 418)), and the display unit continuously controls the screen brightness value of the terminal (Col. 6 lines 4-37).

As to claim 10, Lee discloses the apparatus according to claim 1, wherein the terminal is a mobile terminal (see abstract, also Col.3 lines 1-8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 17 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US Patent 7,158,173) in view of Ogawa (US Patent 6,597,339).

As to claim 7, Lee discloses the apparatus according to claim 6 above.

However, Lee does not teach that if the predetermined time period has expired and a user then manipulates or uses the terminal, the controller again starts controlling the terminal to sense the illumination intensity and to determine the level of illumination intensity, and the display unit again starts controlling the screen brightness value of the terminal.

Ogawa teaches a backlight controller utilizes a time-lapse monitor, which issues interrupt upon user input (Fig. 6 (step 604)) to acquire current state of backlight (Fig. 6 (step 606)), and control the backlight level (Fig. 6 (steps 607-610)) based in the expiration of predetermined time (Fig. 6 (step 605)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the time lapse monitor of Ogawa's into display brightness controller of Lee's because the luminance of the backlight is decreased to save power consumption, it improves usability of a mobile device.

5. Claims 8-9, 18-19 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US Patent 7,158,173) in view of Harney (US patent 4,352,105).

As to claim 8, Lee discloses the apparatus according to claim 1 above.

However, Lee does not teach a data table including a first range of brightness peak values and second range of brightness peak values different than the first range of brightness peak values, the data table further including a first illumination intensity value

corresponding to the first range of brightness peak values and a second illumination intensity value corresponding to the second range of brightness peak values.

Harney discloses a display controller wherein quantizes intensity into difference ranges (See Col. 1 table 1, the table including several illumination intensity values ($I' = 0-3$) corresponding to several ranges of brightness peak values (I)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use range / intensity mapping as in Harney into display controller of Lee, because range mapping or look-up table implementation simplifies the control, it reduces data variables such as brightness peak values into a manageable size (see Harney Col 1 lines 38-68).

As to claim 9, Harney discloses the apparatus according to claim 8, wherein the controller reads the first illumination intensity value (Col. 1 table 1($I'=1$) from the data table (Col. 1 table 1), and the display unit controls the screen brightness value (Col. 1 table 1($I=1-5$)) of the terminal based on the first illumination intensity value read from the data table.

6. Regarding claims 11-20, limitations within these claims are identical to claims 1-3, 5-10 respectively, except they are the method claims. Therefore, same rejections apply to these claims.

7. Regarding claims 21-23, 25-30, limitations within these claims are identical to claims 1-3, 5-10 respectively, except they are the computer program product claims. Therefore, same rejections apply to these claims.

Response to Amendment

8. Applicant's arguments filed 07/30/2007 have been fully considered but they are not persuasive. Applicant asserts, "Lee does not relate to determining a level of illumination intensity based on a most frequently based brightness value of pixel in the digital image." However, examiner respectfully disagrees. In particular, Lee shows a histogram (see Fig. 4(406, 414) and Fig. 9(a)) of luminance elements, according to the dictionary (Merriam-Webster): *a histogram represents a statistical data whose height is corresponding frequencies.*

Applicant also submits, "Lee does not teach or suggest to determine a level of the illumination intensity and / or control the brightness value based on the determined level". Nonetheless, Lee teaches a (step 502 in Fig. 8) to calculate histogram of luminance elements and control the brightness value (Fig. 8(504)).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2629

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuk C. Chow whose telephone number is 571 270-1544. The examiner can normally be reached on 8-6 M-TH E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YC
10/04/2007


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SUPERVISORY PATENT EXAMINER